



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2018-0084; Product Identifier 2018-NE-02-AD; Amendment 39-19212; AD 2018-05-03]**

**RIN 2120-AA64**

**Airworthiness Directives;** Safran Helicopter Engines, S.A., Turboshift Engines

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Safran Helicopter Engines, S.A., Arrius 2F turboshift engines. This AD requires inspection and replacement of the magnetic heads installed on oil system electrical magnetic plugs. This AD was prompted by reports from the manufacturer of a batch of non-conforming magnetic heads installed on electrical magnetic plugs. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

We must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M 30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M 30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this final rule, contact Safran Helicopter Engines, S.A., 40220 Tarnos, France; phone: (33) 05 59 74 40 00; fax: (33) 05 59 74 45 15. You may view this service information at the FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0084.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0084; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations (phone:

800-647-5527) is listed above. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Robert Green, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2018-0012-E, dated January 16, 2018 (referred to hereinafter as “the MCAI”), to address an unsafe condition for the specified products. The MCAI states:

Flaking of the cadmium coating of electrical magnetic plugs head Part Number (P/N) 9 520 01 154 5 was detected. Investigation results indicate that this was the result of manufacturing deficiency. This part is installed on electrical magnetic plugs (front and rear position) of the engine, providing warning signals for early detection of internal part(s) structural degradation, propagating in form of presence of metal particles in the lubrication system. The subsequent investigation identified the batch of affected magnetic plugs heads by serial number (s/n).

This condition, if not detected and corrected, could lead to reduced capability of the particle detection system to identify internal structural failures and consequent in-flight shut-down, resulting in forced landing with possible damage to the helicopter and injury to occupants.

To address this potential unsafe condition, Safran Helicopter Engines issued Alert Mandatory Service Bulletin (MSB) A319 79 4840 and Alert MSB A319 79 4841 to provide inspection and replacement instructions.

You may obtain further information by examining the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0084.

**Related Service Information under 1 CFR Part 51**

We reviewed Safran Helicopter Engines Alert Mandatory Service Bulletin (MSB) No. A319 79 4840, Version A, dated November 27, 2017, and Safran Helicopter Engines Alert MSB No. A319 79 4841, Version A, dated November 20, 2017. The MSBs describe procedures, respectively, for inspecting and replacing the magnetic heads installed on the electrical magnetic plugs. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

**FAA's Determination**

This product has been approved by France and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

**AD Requirements**

This final rule requires inspection and replacement of the magnetic heads installed on oil system electrical magnetic plugs.

**FAA's Justification and Determination of the Effective Date**

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because the compliance time for the action is less than the time required for public comment. Therefore, we find good cause that notice and opportunity for prior public comment are impracticable. In addition, for the reason stated above, we find that good cause exists for making this amendment effective in less than 30 days.

## Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2018-0084 and Product Identifier 2018-NE-02-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this final rule. We will consider all comments received by the closing date and may amend this final rule because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this final rule.

## Costs of Compliance

We estimate that this AD affects 105 engines installed on helicopters of U.S. registry.

We estimate the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
ARRIUS 2F	2 work-hours X	\$0	\$170	\$17,850
Rear	\$85 per hour =			
Electrical Mag	\$170			
Plug				
Inspection				

ARRIUS 2F	4 work-hours X	\$3,061	\$3,401	\$357,105
Front and	\$85 per hour =			
Rear	\$340			
Electrical Mag				
Plug Mag				
Head				
Replacement				

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2018-05-03 **Safran Helicopter Engines (Type Certificate previously held by Turbomeca, S.A.):** Amendment 39-19212; Docket No. FAA-2018-0084; Product Identifier 2018-NE-02-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Safran Helicopter Engines, S.A., Arrius 2F turboshaft engines, with an oil system electrical magnetic plug magnetic head, part number (P/N) 9520011545, with serial numbers (S/Ns) DU4621 through DU5053 inclusive, installed.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7900, Engine Oil System (Airframe Furnished).

**(e) Unsafe Condition**

This AD was prompted by reports from the manufacturer of a batch of non-conforming magnetic heads installed on electrical oil debris magnetic plugs. We are issuing this AD to prevent failure of the engine oil debris detection system. This unsafe condition, if not addressed, could result in the inability to detect engine bearing failures, failure of the engine, in-flight shutdown, and loss of the helicopter.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

(1) Within 15 flight hours or 30 days, whichever occurs first after the effective date of this AD, and then after each flight, inspect the magnetic head installed on the rear electrical magnetic plug in accordance with the Accomplishment Instructions, paragraph 2.4.5, of Safran Helicopter Engines Alert Mandatory Service Bulletin (MSB) A319 79 4840, Version A, dated November 27, 2017.

(2) Within 60 days after the effective date of this AD, replace each affected magnetic head, installed on the front or the rear electrical magnetic plug, with a part eligible for installation in accordance with the Accomplishment Instructions, paragraph



2.4.2, of Safran Helicopter Engines Alert MSB A319 79 4841, Version A, dated November 20, 2017.

(3) After replacement of the magnetic head installed on the rear electrical magnetic plug, as required by paragraph (g)(2) of this AD, the repetitive inspections required by paragraph (g)(1) of this AD are no longer required.

**(h) Installation Prohibition**

After the effective date of this AD, except as part of the inspection required by paragraph (g)(1) of this AD, do not install a magnetic head, P/N 9520011545, with an S/N DU4621 up to and including DU5053 on any engine.

**(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ECO Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(j) Related Information**

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2018-0012-E, dated January 16, 2018, for more information. You may examine the MCAI in the AD docket

on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2018-0084.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Safran Helicopter Engines Alert Mandatory Service Bulletin (MSB) A319 79 4840, Version A, dated November 27, 2017.

(ii) Safran Helicopter Engines Alert MSB A319 79 4841, Version A, dated November 20, 2017.

(3) For Safran Helicopter Engines service information identified in this AD, contact Safran Helicopter Engines, S.A., 40220 Tarnos, France; phone: (33) 05 59 74 40 00; fax: (33) 05 59 74 45 15.

(4) You may view this service information at FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on February 23, 2018.

Karen M. Grant,  
Acting Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.  
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